

Statement of Basis
Briefing Memorandum

Lac Vieux Desert Wastewater Facility MI-0055204-2
Lac Vieux Desert Band of Lake Superior Chippewa
Lac Vieux Desert Utility Commission
Lac Vieux Desert Indian Reservation, Gogebic County,
Watersmeet, Michigan (the SE ¼ of the NW ¼ of Section 22, Township 45N, Range 39W)

The above named applicant has applied for an NPDES Permit to discharge into the designated receiving water. The facility and its discharge are located within the exterior boundaries of the Lac Vieux Desert Indian Reservation. The permit will be issued by the U.S. Environmental Protection Agency.

The permittee has built and operates a 2-cell wastewater stabilization lagoon. The primary cell is approximately 6.1 acres and the secondary cell is approximately 2.9 acres. The treated effluent can be used or disposed of in three ways. The treated effluent can be discharged in a controlled manner during the spring and fall to a wetland that is tributary to Bonifas Creek. The treated effluent can also be pumped to and mixed with water in the permittee's 1.5 acre golf course irrigation pond to be used to irrigate the permittee's golf course during periods of dry weather. The third method contemplated but has not been used as of yet is for the making of base snow to be used at the permittee's snowmobile track. If this method is used, aerators may have to be installed in the secondary cell to keep the cell from completely freezing.

The design average influent flow for the facility is 65,000 gpd. The treatment system provides service for the Lac Vieux Desert Indian Reservation.

Limitations and Monitoring Requirements

	<u>30-day Ave.</u>	<u>7-day Ave.</u>
Flow	Monitor only	
BOD ₅	30 mg/L	45 mg/L
TSS	45 mg/L	65 mg/L
pH	Between 6.5 S.U. and 9 S.U.	
E. coli	126 E.coli/100 ml	
Dissolved Oxygen	5.0 mg/L (daily minimum)	
Ammonia (as N)	Monitor only	
Total Phosphorus	Monitor only	

Discharge is limited to a maximum 6 inches per day. Discharge flow was calculated as follows:

2.9 acres x 0.5 feet/day (6 inches/day) x 325,900 gallons per acre-ft \approx 0.47 million gallons/day.

Loading limits in the permit were calculated using the following formula:

0.47 mgd x limit (mg/L) x 8.34 = Loading (lbs/d).

Basis for limits: The limits were developed to ensure compliance with 40 CFR Part 133 and protection of Michigan water quality standards where they are applicable. The Michigan Department of Environmental Quality has issued a general permit for the above type of facility and this permit is consistent with that general permit. This general permit is part of the Administrative Record. EPA is the appropriate authority for purposes of certifying the proposed discharge under Section 401 of the Clean Water Act. Clean Water Act Section 401 certification is not needed from the state or the tribe as neither has water quality standards applicable to the receiving water at the point of discharge. EPA is moving in the direction of using E. coli, which is a better indicator of recreational suitability, instead of fecal coliform. The 30-day average limit for E. coli, based on EPA's water quality criteria, would be 126 E. coli/100 ml. The permittee used the prior permit term to determine if the facility was capable of complying with the E. coli limit using the existing treatment. Data indicate that the facility is generally in compliance with the limits. The requirements for mixing the treated effluent with irrigation water and for base snow making were developed to protect groundwater and public health using permit writer's judgment.

Special Conditions

- The treatment shall be operated by a certified wastewater treatment operator.
 - The vegetation on the dikes shall be cut and the dikes shall be maintained.
 - Monitoring and use requirements for the permittee's other possible uses of the treated effluent i.e., mixing with irrigation water and making base snow.
 - The permit contains Industrial Waste Pretreatment Program requirements in accordance with 40 CFR Parts 122 and 403 to prevent interference and pass through.
 - Compliance with 40 CFR Part 503 (sludge use and disposal regulations). It is expected, however, that sludge will not be land applied during this permit term.
 - If the permittee wishes to land apply its sewage sludge prior to the expiration date of this permit, the permittee shall submit a request to the Chief of the NPDES Programs Branch containing the information listed in 1 through 5 below. Upon receipt of the information, the permit may be modified with public notice. If sewage sludge is land applied outside the exterior boundaries of the reservation, it shall also be done in compliance with the Michigan Part 24 Biosolids Rules of Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act. The permittee shall contact the Michigan Department of Environmental Quality prior to land applying any sludge outside the exterior boundaries of the reservation.
1. Certification that the application contractor has received all necessary information to comply with applicable provisions of 40 CFR Part 503;
 2. Site information including:
 - Site location by latitude and longitude, and code number to identify field or field portion.
 - Plat map showing location of the site relative to local landmarks.
 - Proximity to surface waters of the United States.
 - Potential presence of endangered species.
 - Soil fertility test with fertilizer recommendations.

- Previous crop and future crop with yield goal.
 - Participation Agreement signed by the landowner or operator, if different, of the site to receive sludge.
 - Determination whether the site has previously been used for sewage sludge applications.
 - If previously used, determination of cumulative pollutant loading rate since July 19, 1993;
3. Certification that the local township supervisor has been notified that a site has been identified and is intended for use;
 4. Certification that the County Health Department has been notified that hauling is scheduled to take place; and
 5. Certification that notice has been provided to landowners and occupants adjacent to, or abutting the proposed land application site. Such notice shall be accomplished by one of the following: written notice through the regular mail; public notice in the local newspaper; public reading of notice at open local public meeting.

ESA and NHPA Compliance

EPA believes it has satisfied its requirements under the Endangered Species Act and the National Historical Preservation Act. Since this is an existing facility with no new planned expansion or construction expected within the permit term, it is believed that the issuance of the permit and the continued operation of the facility will have no effect on endangered or threatened species or their critical habitat and will have no impact to historical, archeological, or cultural resources.

Significant Changes from the Previous Permit

1. The draft permit has a limit for E. coli and no longer has monitoring for fecal coliform for the reason stated above.
2. The Industrial Waste Pretreatment Program language has been updated.
3. The Sewage Sludge language has been updated.
4. Part II, Standard Conditions has been updated.

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The permit is based on NPDES and sludge applications dated February 25, 2008, and additional supporting documents found in the Administrative Record.

A five year permit is proposed as allowed by regulation.

Written by: John Colletti August 2008
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